

Chapter 1. Guiding Principles – Strategic Direction

The Arizona Long-Range Transportation Plan (MoveAZ) provides planning guidance for the Arizona Department of Transportation (ADOT) for 20 years. MoveAZ is one of several planning activities conducted by ADOT and fits within a larger set of activities used by the agency to identify transportation needs, develop solutions, and deliver specific projects to address these solutions. The plan has three main goals:

1. To provide a **strategic direction** for transportation planning in the State;
2. To conduct in-depth analysis of actual projects and programs using **performance-based planning** techniques; and
3. To **coordinate** with regional planning agencies and the general public throughout the planning process.

MoveAZ helps ADOT address the many transportation challenges that Arizona will face over the next 20 years. The plan provides ADOT with tools to help evaluate and prioritize solutions to these challenges.

■ 1.1 Why Develop a Strategic Direction

The strategic direction is the foundation for the MoveAZ Plan, providing a base on which all elements of the plan are built. It includes a process to understand transportation issues in Arizona, as well as the larger context in which the transportation system must operate. It is linked to all stages of the planning process and connected to previous planning efforts conducted by ADOT, as well as by other state, regional, and local agencies.

The elements of the strategic direction include a mission statement and long-range goals and objectives. The mission statement is a general, brief description of the desired future for transportation in Arizona. The long-range goals provide additional specificity, defining several goals for ADOT to focus on in the development of MoveAZ. The objectives are statements that describe the specific means to achieve these goals.

In addition to identifying a desired future for transportation in the State, the strategic direction guides the evaluation of projects and programs. The MoveAZ Plan is performance-based, providing ADOT with several tools to understand the use of the transportation system and the impact that specific projects will have upon that system.

The strategic direction process included grouping the long-range objectives into broad performance factors. These factors – one-word descriptions such as mobility, safety, and others – capture the spirit of one or more of the objectives. The performance factors provide the basis for developing performance measures used to conduct specific project evaluations. The long-range objectives also inform the selection of performance measures. Performance-based planning and the selection of performance measures are described in Chapter 4.

■ 1.2 How the Strategic Direction Was Developed

The MoveAZ Plan has not been developed in a vacuum. Instead, it has been integrated with previous planning efforts conducted both by ADOT and other agencies in the State. The strategic direction provides one clear link between previous planning and MoveAZ.

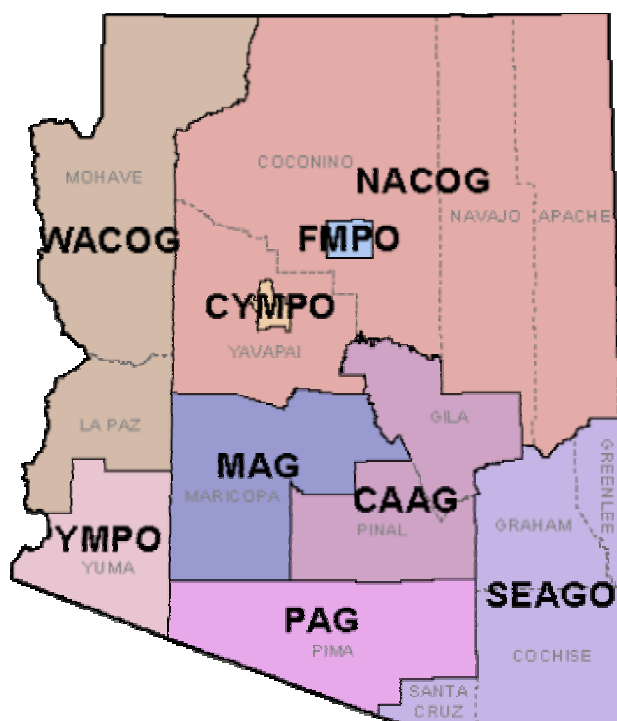
The strategic direction is based on a review and evaluation of previous planning processes in Arizona and similar experiences from other states. ADOT identified recurrent themes and issues from these sources and, through review with internal and external advisory bodies and the general public, developed a mission statement and long-range goals and objectives that constitute the strategic direction.

The first step in developing the strategic direction involved reviewing the following major planning efforts:

- Transportation and vision-based plans conducted by ADOT and regional and local transportation entities in Arizona;
- Planning documents and policy analyses conducted by state agencies and research institutes with mandates other than transportation, such as economic development, land use, and commerce;
- Similar transportation planning activities in Southwestern and Rocky Mountain states, as well as in states that have pioneered vision-based planning efforts; and
- Four papers commissioned for the MoveAZ Plan that examined specific issues relevant to the future of transportation in Arizona.

The second step in the development of the strategic direction was a review of this material by ADOT and the Working Group, an advisory committee convened for the MoveAZ development process. The Working Group consisted of the chief executives and head transportation planner for each of the regional planning agencies in the State (Figure 1.1), as well as a representative of the Arizona Transit Association (AZTA) and the Inter-Tribal Council of Arizona (ICTA). The Central Yavapai Metropolitan Planning Organization was formed in December 2003 and joined the Working Group at that time. This group was consulted throughout the planning process and reviewed all key documents produced for the plan, including the strategic direction.

Figure 1.1 Regional Planning Agencies in Arizona



The final step in the development of the strategic direction was public review of the assembled material and draft strategic direction. Chapter 2 describes the public partnering process used by MoveAZ.

The material produced for review by the Working Group and the public covered two subjects: 1) the key transportation issues to be addressed in a long-range plan, and 2) the general issues and trends that shape the overall environment within which the transportation system operates. The remainder of this section provides a summary review of these subjects. Appendix A contains a more comprehensive review of previous planning efforts.

Summary Review of Transportation Plans

One source of the strategic direction was previous planning efforts, including plans developed by ADOT, the Governor's Office (notably the Transportation Vision 21 Task Force), metropolitan planning organizations, councils of governments, and American-Indian reservations. These plans provided raw material that was shaped into the mission statement, goals, and objectives.

MoveAZ included a review of over 100 plans that revealed several important factors that must be part of the strategic direction for Arizona. Table 1.1 presents a summary of the

elements raised in previous planning efforts by the type of agency that produced the plan (ADOT statewide and corridor plans, ADOT small area transportation plans, regional plans, tribal plans, and other plans). For each cell of the table, a mark indicates how frequently plans of a given type mentioned particular transportation issues or concerns, such as mobility, safety, and funding.

Table 1.1 Elements of Past Strategic Direction Efforts

Element	ADOT	Small Area	MPO	Tribal	Other
<i>General Elements</i>					
Balanced/multimodal	◆	◆	◆		◆
<i>Transportation Elements</i>					
Accessibility, mobility		◆	■	◆	■
Safety		■	◆	◆	
Funding flexibility, local control					■
Stable, equitable funding	◆	◆		■	■
<i>Connection to Other Factors</i>					
Land use connection	◆	◆	■	■	◆
Environmental	◆	■	◆	√	■
Economic development	◆	√		√	
Tourism, recreation		◆		◆	
Social issues				√	
Community character		■		◆	■

■ – A few mentions; ◆ – Several mentions; and √ – All or nearly all plans mention.

Source: Cambridge Systematics, 2002.

Plans from most levels of government encouraged the development of a balanced, well-integrated multimodal transportation system. The features of this system clearly included connections to land use, environmental planning, and economic planning. Additionally, past efforts make note of the need to provide a safe, accessible system that ensures easy mobility in both urban and rural areas. Rural areas often have different needs than urban areas, and the MoveAZ Plan is sensitive to these differences. American-Indian reservation plans, in particular, tended to raise somewhat different, though overlapping, concerns than other plans.

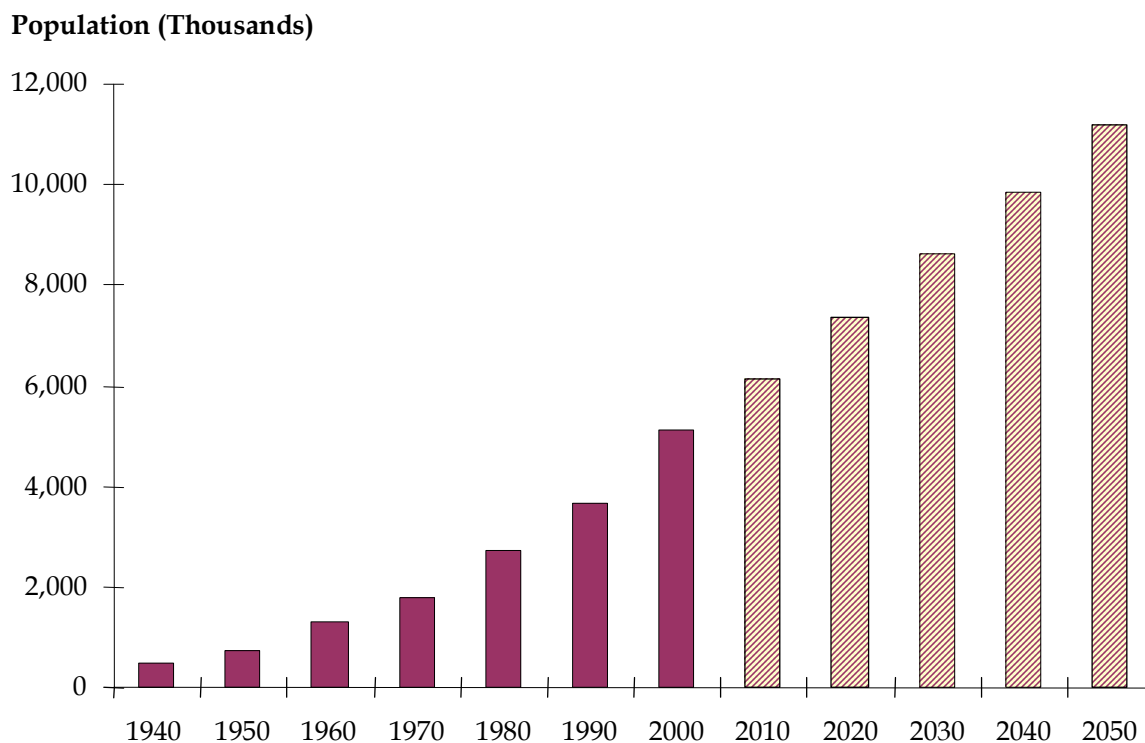
The Arizona Context

In addition to reviewing past transportation and other planning efforts in Arizona and other key states, the MoveAZ strategic direction drew from an assessment of major trends and issues facing the State, including population growth and change, economic change, environmental issues, quality of life, and urban-rural differences in Arizona.

Population Growth and Change

Arizona has been among the fastest growing states in the U.S. every decade since the 1960s. The State has grown from only 250,000 people in 1950 to over five million in 2000. The Phoenix region has added over two million new residents since 1970, and is currently home to nearly three million people. Population projections developed by the Arizona Department of Economic Security show Arizona adding another 2.5 million people by 2020 (Figure 1.2). Future population growth will continue to be centered in Phoenix, but the number of metropolitan areas in Arizona is growing. With the Prescott area recently certified as the Central Yavapai Metropolitan Area, continued growth in Yuma and Flagstaff, and several other areas likely to achieve metropolitan status by 2025, Arizona will face a host of new and emerging transportation needs and concerns.

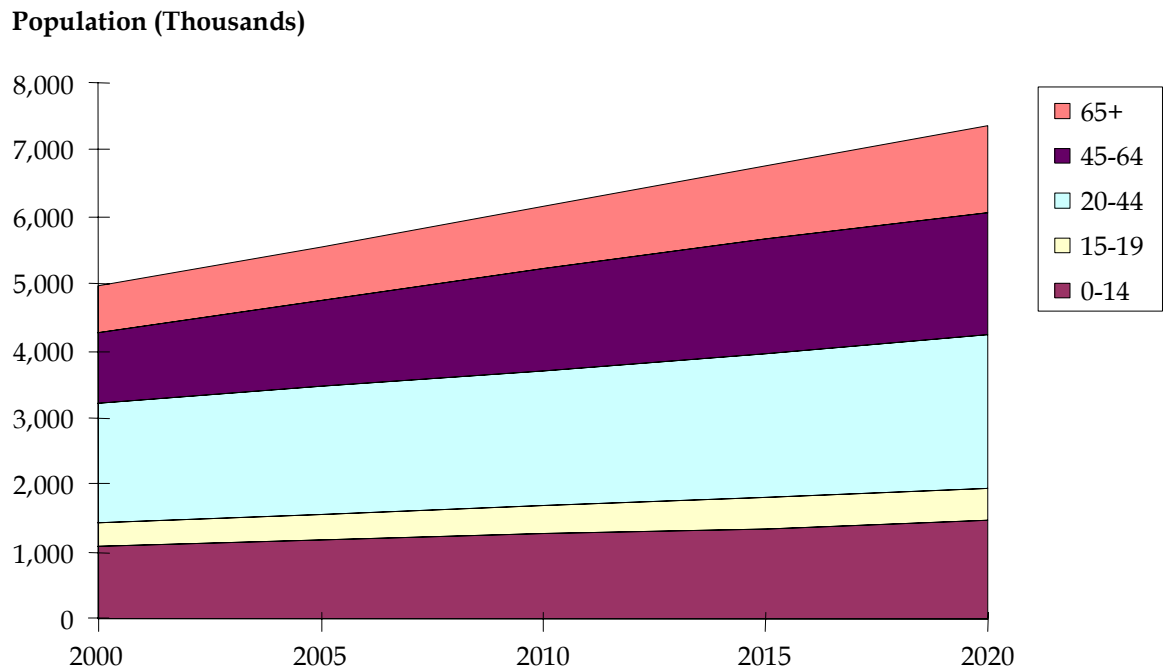
Figure 1.2 Historic Population Growth and Future Estimates



Source: Arizona Department of Economic Security, 2002.

The composition of Arizona's population is changing as well. Like many states in the southwest, Arizona is a major destination for Mexican and other Latin American immigrants. On average, these immigrants have somewhat less education, are younger, and have larger average household sizes than Arizona's historical population base. In addition, Arizona's population has been aging, a trend that is expected to continue in the future (Figure 1.3).

Figure 1.3 Projected Age Distribution of Arizona's Population



Source: Arizona Department of Economic Security, 2002.

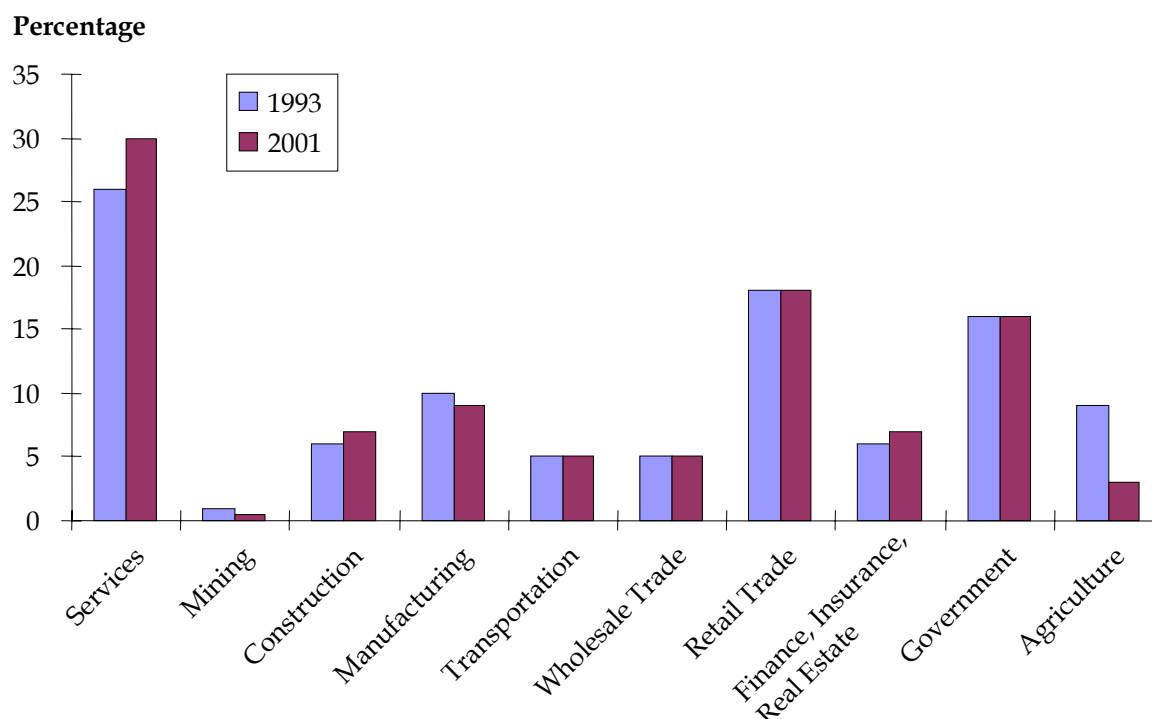
Population growth and change have significant implications for land use planning and its relationship with the transportation system in Arizona. Encouraging coordination between land use and transportation planning could improve Arizona's ability to address the transportation needs of millions of new residents over the next 20 years. Population growth puts pressure on all aspects of government, not least the transportation system. Phoenix already faces serious congestion problems that may intensify over the next 20 years. As other areas of the State grow, new problems will emerge.

A Changing Economy

Economic growth has largely maintained pace with population growth in Arizona. As with population, over 70 percent of jobs, personal income, and sales are generated in the Phoenix metropolitan area; an additional 15 percent is generated in the Tucson metropolitan area. Phoenix and Tucson are manufacturing centers attempting to attract high-technology development. Other urban areas, such as Flagstaff and Sierra Vista, are also

pursuing high-technology and “new economy” knowledge-intensive jobs. Economic development elsewhere in the State, in contrast, is generally quite different. Outside of the major urban areas, recreation-based employment, tourism, and services for retirees are key. Agriculture and mining also continue to play important roles, as they have throughout the State’s history. The opportunities for international trade are growing, both along the Mexican border and also with major partners overseas. Figure 1.4 provides an overview of recent shifts in employment by industry.

Figure 1.4 Arizona Employment by Industry



Source: Arizona Department of Economic Security, 2002.

Population and economic growth, combined with national and international changes in goods production and movement, make freight movement a major issue for Arizona. Arizona is positioned to capture a large share of North American Free Trade Agreement (NAFTA) traffic, and could develop strategic linkages of suppliers to Maquiladora factories in Mexico. Maquiladora factories manufacture or assemble products for sale in the U.S., using inputs to their manufacturing processes from the U.S. At the same time, Arizona’s largest trading partners are overseas, making Arizona (like all U.S. states) heavily reliant on the state and national transportation system to supply Arizonans with commodities. In addition, growth in small parcel shipments and overnight shipping means different types and numbers of trucks on the road.

Environmental Pressures

One of Arizona's greatest assets is its varied natural setting. The Arizona Department of Environmental Quality has actively pursued programs to improve the State's environment. Since the early 1990s, air quality has improved; and, today, few areas of the State are out of compliance with Federal air and water quality standards.

The continuing influx of residents and economic activity will increase pressure on Arizona's environmental resources. As the population center of the State, the Phoenix region faces the greatest challenge to maintaining air and water quality. The main markers of poorer environmental conditions are in Phoenix, where air pollution has reduced visibility in the region over the past several years. However, there has been no violation of the carbon monoxide and one-hour ozone standards since 1996. The state and local governments have implemented a wide variety of air quality measures to keep pace with growth.

Land preservation and sustainable growth are also major concerns in Arizona. The State has passed several laws in recent years aimed at preserving open space and improving the planning process, implementing a form of "smart growth" that has become increasingly popular in the United States.

The Urban/Rural Dichotomy in Arizona

Nearly two-thirds of Arizona's population live in metropolitan Phoenix. Arizona's five established metropolitan areas (Phoenix, Tucson, Yuma, Flagstaff, and Prescott) account for over 85 percent of the State's population. Compared to other similarly-sized Western states, Arizona's population is much more highly concentrated. Only Nevada, with over three-quarters of the population in Las Vegas and 95 percent in Las Vegas and Reno combined, is more centralized. Similarly-sized states in the South and Midwest exhibit different development patterns, with only 20 to 30 percent of their populations living in the largest metropolitan area.

State transportation planners should remain cognizant of two fundamentally different sets of issues and challenges facing urban and rural Arizona – persistent challenges to rural transportation systems and evolving challenges to existing and emerging urban areas. Mobility and other issues in rural Arizona remain on the agenda, and the State will need to be aware of its efforts to address them.

■ 1.3 Mission Statement, Goals, and Objectives

The strategic direction is an attempt by MoveAZ to address the major transportation issues and concerns facing the State. The review described above presented key themes that are reflected in the mission statement, goals, and objectives. These include a focus on

quality of life; the need for mobility; and an attempt to address the variety of issues raised by previous plans, the general public (see Chapter 2), and the Arizona context.

The strategic direction consists of three basic elements:

1. The **mission statement** provides a brief description of a desired future condition or set of conditions that is dependent on the outcomes of transportation policies and decisions, usually among a broader set of policies.
2. The **long-range goals** reflect the spectrum of major goals or desired outcomes expressed by both the mission statement and numerous planning efforts from around the State.
3. Performance factors may help describe multiple goals, but suggest different, more specific **long-range objectives** and strategies for action. These objectives are grouped into broad **performance factors** (e.g., “reliability” or “equity”) that can be described and evaluated with more detailed performance measures (see Chapter 4).

This section of Chapter 1 provides the final strategic direction that resulted from the review of plans, analysis of major issues, consultation with internal and external advisory committees, and public involvement.

Figure 1.5 MoveAZ Mission Statement

To support Arizona’s quality of life, the MoveAZ Plan will provide a safe, reliable, and efficient transportation system for people and goods that strengthens our economic vitality; assures access to services and recreational opportunities; preserves the beauty and health of our natural environment; and blends into our urban and rural landscapes.

To achieve these ends, the Move AZ Plan will:

- *Be fiscally responsible;*
- *Provide citizens with transportation choices;*
- *Emphasize accountability;*
- *Be responsive to change;*
- *Harmonize with Arizona’s proud heritage and unique diversity;*
- *Encourage coordination of transportation and land use planning at the state, regional, and local level; and*
- *Address air, transit, rail, highway, bicycle, and pedestrian travel.*

Table 1.2 MoveAZ Goals and Objectives

Long-Range Goal	Long-Range Performance Objectives
Access and Mobility. A reliable and accessible multimodal transportation system that provides for the efficient mobility of people and goods throughout the State.	Mobility Factor <ul style="list-style-type: none"> • Maintain and enhance levels of circulation (e.g., reduced congestion) on highways, arterials, and major collectors. • Maintain and enhance the ability of goods to move through and around urban areas with minimal delay. • Encourage the development of transit options for economically-disadvantaged populations.
	Reliability Factor <ul style="list-style-type: none"> • Improve the availability and quality of real-time information to increase the ease of use and attractiveness of both highways and public transportation. • Reduce delay caused by at-grade highway-railroad crossings. • Develop and implement an access management program to preserve the reliability of the state highway system.
	Accessibility Factor <ul style="list-style-type: none"> • Encourage the development of effective public transportation, ride share, and related options, where appropriate, and cost effective. • Support Title 6 Americans with Disabilities Act (ADA) compliance for access by disadvantaged groups to all transportation services. • Integrate transit, bicycle, and pedestrian facilities into highway improvements, where feasible. • Maintain and enhance connections to major commercial, residential, and tourist destinations by both highways and public transportation. • Maintain and expand border crossing facilities.
	Connectivity Factor <ul style="list-style-type: none"> • Maintain and enhance intermodal passenger connections between air and surface (highway and transit) transportation modes. • Maintain and enhance intermodal freight linkages for truck-rail and truck-air transfers. • Continue necessary expansion and connection of Arizona's metropolitan highways and high-occupancy vehicle (HOV) lanes. • Ensure the connection of rural communities to the state highway network.
Economic Vitality. A multimodal transportation system that improves Arizona's economic competitiveness and provides access to economic opportunities for all Arizonans.	Economic Competitiveness Factor <ul style="list-style-type: none"> • Maintain and expand freight transportation and intermodal linkages. • Increase coordination of transportation planning with the economic development activities of state, regional, and local governments. • Equitably distribute transportation to all areas of the State.
	Accessibility Factor <ul style="list-style-type: none"> • Maintain and improve truck linkages between Arizona, other states, and Mexico. • Maintain and improve access to major tourist destinations. • Encourage the development of transit services that provide access to job centers.

Table 1.2 MoveAZ Goals and Objectives (continued)

Long-Range Goal	Long-Range Performance Objectives
Safety. Provide safe transportation for people and goods.	Safety Factor <ul style="list-style-type: none"> • Reduce the rate of crashes, fatalities, and injuries for motor vehicles, bicycles, and pedestrians. • Design new transportation facilities to minimize accidents. • Improve the safety of commercial vehicles, public transportation vehicles and facilities, and where modes intersect. • Upgrade at-grade railroad crossing protection. • Increase ADOT's support and use of incident management on the state highway system. • Coordinate with Federal, regional, local, and tribal officials to provide redundancy of access for emergency response and evacuation situations (e.g., bridge crossings, multiple access routes to airports and other key transportation facilities, etc.) • Improve safety and security for rural area travelers.
Stewardship. A balanced, cost-effective approach that combines preservation with necessary expansions and coordinates with local and regional transportation and land use planning.	Preservation Factor <ul style="list-style-type: none"> • Preserve and maintain existing transportation infrastructure. • Develop and implement an access management program to preserve the functionality of the state highway system. • Coordinate planned transportation system expansions with future funding capabilities. • Increase efficient coordination of state transportation planning and programming processes with local and regional land use planning processes. Mobility Factor <ul style="list-style-type: none"> • Increase and/or protect capacity of the existing transportation system through increased use of traffic operation and management strategies, including Intelligent Transportation Systems (ITS) methods.
Environmental Sensitivity. A transportation system that enhances Arizona's natural and cultural environment.	Resource Conservation Factor <ul style="list-style-type: none"> • Increase energy conservation and the use of recycled materials and cost-effective alternate energy sources. • Give preference to use of native or indigenous species in transportation-related landscaping projects. • Encourage the development of smart growth policies in coordination with state, regional, local, and tribal planning processes. • Increase proactive coordination of transportation planning with Federal, state, and regional environmental agencies. • Minimize the contribution of transportation investments to air, water, and noise pollution in all areas of the State. • Ensure that negative environmental impacts of transportation investments do not fall disproportionately on disadvantaged groups. • Minimize the impact of transportation investments on natural habitats, animal travel corridors, historic sites, and endangered species